



**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2021-1174; Project Identifier MCAI-2021-00246-R; Amendment 39-21988; AD 2022-07-01]**

**RIN 2120-AA64**

**Airworthiness Directives; Leonardo S.p.a. Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2020-23-07, which applied to certain Leonardo S.p.a. Model AB139 and AW139 helicopters. AD 2020-23-07 required removing certain life raft reservoirs (reservoirs) from service, inspecting the reservoirs and actuator cables, and depending on the inspection results, replacing the reservoir or adjusting the actuator cable. This AD was prompted by the inadvertent activation and deployment of an emergency life raft while the helicopter was in flight. This AD retains the requirements of AD 2020-23-07, and requires expanding the required actions to include additional serial-numbered reservoirs, and updates applicable service information. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of December 4, 2020 (85 FR 73610, November 19, 2020).

**ADDRESSES:** For service information identified in this final rule, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520,

21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://customerportal.leonardocompany.com/en-US/>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1174.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1174; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Darren Gassetto, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7323; email [Darren.Gassetto@faa.gov](mailto:Darren.Gassetto@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-23-07, Amendment 39-21323 (85 FR 73610, November 19, 2020) (AD 2020-23-07). AD 2020-23-07 applied to Leonardo S.p.a. Model AB139 and AW139 helicopters, with emergency flotation kit part number (P/N) 4G9560F00111 (15 passengers) or 4G9560F00211 (18 passengers). The NPRM published in the *Federal Register* on January 12, 2022 (87 FR 1706). In the NPRM, the FAA proposed to retain all of the requirements of AD 2020-23-07, and proposed to require expanding the required actions to include additional serial-numbered reservoirs identified in the applicable service information. The NPRM also proposed to allow alternative service information to be used for specific portions of certain inspections and corrective actions. Additionally, the NPRM proposed an exemption for certain required actions for reservoirs marked with an “R” after the serial number (S/N).

The NPRM was prompted by EASA AD 2021-0054, dated February 25, 2021 (EASA AD 2021-0054), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Leonardo S.p.A. Helicopters, formerly Finmeccanica S.p.A, AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation, Model AB139 and AW139 helicopters, all S/Ns, if equipped with emergency flotation kit, having P/N 4G9560F00111 (15 passengers) or P/N 4G9560F00211 (18 passengers).

EASA advises that additional serial-numbered reservoirs are affected by the same unsafe condition. EASA further advises that Leonardo Helicopters issued Alert Service Bulletin (ASB) No. 139-662, dated February 15, 2021 (ASB 139-662), which includes a Table listing the S/Ns of the additional batch of affected reservoirs and provides additional replacement and inspection instructions. Furthermore, EASA advises some of the affected reservoirs could become serviceable after an inspection and after these reservoirs are re-identified and marked with an “R.” This condition, if not addressed, could result in deployment of a life raft (raft) during flight, separation of the raft with possible impact on the rotors, and subsequent reduced control of the helicopter.

Accordingly, EASA AD 2021-0054 retains the requirements of EASA AD 2020-0185, dated August 19, 2020 (EASA AD 2020-0185), which prompted AD 2020-23-07, and requires for certain helicopters replacement of affected reservoirs and, for other helicopters, inspections of the valve pull rod and the actuator cable of the raft. Depending on the findings, EASA AD 2021-0054 requires accomplishment of the applicable corrective actions. EASA AD 2021-0054 also prohibits re-installation of an affected reservoir on any helicopter.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

### **Conclusion**

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. This AD is adopted as proposed in the NPRM.

### **Related Service Information Under 1 CFR Part 51**

The FAA reviewed Leonardo Helicopters ASB No. 139-648, dated August 10, 2020 (referred to as "ASB 139-648 First Issue") and ASB No. 139-648, Revision A, dated February 15, 2021 (ASB 139-648 Rev A). ASB 139-648 First Issue specifies procedures to replace certain reservoirs and return them to the supplier, inspect the valve pull rod by measuring the actuator cable between the face of the pull rod and the back of the valve cap, inspect the actuator cable by verifying the presence of a clearance between the sphere at the end of the actuator cable and the activation system, and adjust the actuator cable. ASB 139-648 Rev A specifies the same procedures as ASB 139-648 First Issue, except ASB 139-648 Rev A includes a Note clarifying that LH and RH reservoirs with S/Ns marked (or recorded on the component Log Card) with the suffix "R" after the

S/N are not affected by Part I of ASB 139-648 Rev A, even if they have an S/N listed in Table 1 of ASB 139-648 Rev A.

The FAA also reviewed ASB 139-662, which specifies additional serial-numbered reservoirs that are affected by the same unsafe condition. ASB 139-662 also provides additional actuator cable inspection procedures for these affected reservoirs.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **Differences Between this AD and EASA AD 2021-0054**

EASA AD 2021-0054 uses flight hours (FH) for certain compliance times, whereas this AD uses hours time-in-service (TIS). EASA AD 2021-0054 specifies the compliance time for certain serial-numbered reservoirs to be replaced is within 25 FH after August 26, 2020 (the effective date of EASA AD 2020-0185), whereas this AD requires certain serial-numbered reservoirs to be removed from service within 25 hours TIS after December 4, 2020 (the effective date of AD 2020-23-07). EASA AD 2021-0054 specifies the compliance time for certain serial-numbered reservoirs to be replaced is within 25 FH after March 4, 2021 (the effective date of EASA AD 2021-0054), whereas this AD requires certain serial-numbered reservoirs to be removed from service within 25 hours TIS after the effective date of this AD.

EASA AD 2021-0054 specifies the compliance time to inspect the valve pull rod for certain helicopters is after replacement of the affected reservoir and within 5 FH after the serviceable reservoir exceeds 50 FH since installation, whereas this AD requires the valve pull rod inspection for certain helicopters within 25 hours TIS or before the reservoir accumulates 55 total hours TIS since first installation on a helicopter, whichever occurs later after December 4, 2020 (the effective date of AD 2020-23-07).

EASA AD 2021-0054 specifies the compliance time to inspect the actuator cable for certain helicopters is before next flight after the replacement of the affected reservoir and for certain other helicopters within 25 FH after August 26, 2020 (the effective date of EASA AD 2020-0185), whereas this AD requires the actuator cable inspection for certain helicopters within 25 hours TIS after December 4, 2020 (the effective date of AD 2020-

23-07).

EASA AD 2021-0054 requires returning removed reservoirs to the supplier, whereas this AD requires removing certain reservoirs from service and replacing other reservoirs instead.

### **Costs of Compliance**

The FAA estimates that this AD affects 15 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Replacing a reservoir takes about 1 work-hour and parts cost up to \$3,710 for an estimated cost of up to \$3,795 per reservoir.

Inspecting the valve pull rod of a reservoir takes about 1 work-hour for an estimated cost of \$85 per reservoir and up to \$ 2,550 for the U.S. fleet.

Inspecting an actuator cable takes about 0.25 work-hour for an estimated cost of \$21 per inspection and up to \$630 for the U.S. fleet.

If required, adjusting an actuator cable takes about 0.75 work-hour for an estimated cost of \$64 per cable.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2020-23-07, Amendment 39-21323 (85 FR 73610, November 19, 2020); and

- b. Adding the following new airworthiness directive:

**2022-07-01 Leonardo S.p.a.:** Amendment 39-21988; Docket No. FAA-2021-1174; Project Identifier MCAI-2021-00246-R.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2020-23-07, Amendment 39-21323 (85 FR 73610, November 19, 2020) (AD 2020-23-07).

**(c) Applicability**

This AD applies to Leonardo S.p.a. Model AB139 and AW139 helicopters, certificated in any category, with emergency flotation kit part number (P/N) 4G9560F00111 (15 passengers) or 4G9560F00211 (18 passengers) installed.

**(d) Subject**

Joint Aircraft Service Component (JASC) Codes: 2560, Emergency Equipment, and 2564, Life Raft.

**(e) Unsafe Condition**

This AD was prompted by the inadvertent activation and deployment of an emergency life raft while the helicopter was in flight. The FAA is issuing this AD to prevent the unintended deployment of a life raft (raft). The unsafe condition, if not addressed, could result in the deployment of a raft during flight, separation of the raft with possible impact on the rotors, and subsequent reduced control of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) For helicopters with a right-hand (RH) or left-hand (LH) life raft reservoir (reservoir) P/N 3G2560V01951 or P/N 3G2560V01251 and with a serial number (S/N) listed in Table 1 of Leonardo Helicopters Alert Service Bulletin (ASB) No. 139-648, dated August 10, 2020 (referred to as “ASB 139-648 First Issue”), within 25 hours time-in-service (TIS) after December 4, 2020 (the effective date of AD 2020-23-07), remove each affected reservoir from service. Any reservoir with the letter “R” after the S/N is excluded from this requirement.

(2) For helicopters with a RH or LH reservoir P/N 3G2560V01951 or P/N 3G2560V01251 and with an S/N listed in Table 1 of Leonardo Helicopters ASB No. 139-662, dated February 15, 2021 (ASB 139-662) within 25 hours TIS after the effective date of this AD, remove each affected reservoir from service. Any reservoir with the letter “R” after the S/N is excluded from this requirement.

(3) For helicopters with a RH or LH reservoir P/N 3G2560V01951 or P/N 3G2560V01251 and with an S/N not listed in Table 1 of ASB 139-648 First Issue or



Table 1 of ASB 139-662 installed, within 25 hours TIS or before the reservoir accumulates 55 total hours TIS since first installation on a helicopter, whichever occurs later after December 4, 2020 (the effective date of AD 2020-23-07), inspect the valve pull rod of each reservoir by following the Accomplishment Instructions, Part II, paragraphs 3. through 5.1, of ASB 139-648 First Issue. Any reservoir with the letter “R” after the S/N is included in this requirement. If the measurement of the actuator cable between the face of the pull rod and the back of the valve cap exceeds 68.5 mm, before further flight, replace the reservoir. As an alternative to using the specified portions of ASB 139-648 First Issue, you may accomplish the valve pull rod inspection by following the Accomplishment Instructions, Part II, paragraphs 3. through 5.1, of Leonardo Helicopters ASB No. 139-648, Revision A, dated February 15, 2021 (ASB 139-648 Rev A).

Note 1 to paragraph (g)(3): An actuator cable, which is referenced in paragraphs (g)(3) and (4) of this AD, is also known as an actuation cable.

(4) For helicopters with a RH or LH reservoir P/N 3G2560V01951 or P/N 3G2560V01251 and with an S/N not listed in Table 1 of ASB 139-648 First Issue or Table 1 of ASB 139-662 installed, within 25 hours TIS after December 4, 2020 (the effective date of AD 2020-23-07), inspect the actuator cable of each reservoir by following the Accomplishment Instructions, Part III, paragraphs 3. through 5.1, of ASB 139-648 First Issue. Any reservoir with the letter “R” after the S/N is included in this requirement. If the clearance between the sphere at the end of the actuator cable and the activation system exceeds 5.0 +0.00/–2.0 mm, before further flight, adjust the actuator cable by following Annex A of ASB 139-648 First Issue. As an alternative to using the specified portions of ASB 139-648 First Issue, you may accomplish the actuator cable inspection and corrective action by following:

(i) The Accomplishment Instructions, Part III, paragraphs 3. through 5.1, and Annex A, as applicable, of ASB 139-648 Rev A, or

(ii) The Accomplishment Instructions, paragraphs 4 through 4.3.1, and Annex A, as applicable, of ASB 139-662.

(5) As of the effective date of this AD, do not install reservoir P/N 3G2560V01951 or P/N 3G2560V01251 with an S/N listed in Table 1 of ASB 139-648

First Issue, Table 1 of ASB 139-648 Rev A, or Table 1 of ASB 139-662 on any helicopter. Any reservoir with the letter “R” after the S/N is excluded from this requirement.

(6) As of the effective date of this AD, do not install a reservoir P/N 3G2560V01951 or P/N 3G2560V01251 with an S/N other than an S/N listed in Table 1 of ASB 139-648 First Issue, Table 1 of ASB 139-648 Rev A, or Table 1 of ASB 139-662, on any helicopter unless you have complied with the requirements in paragraphs (g)(3) and (4) of this AD, as applicable to your helicopter.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(i) Related Information**

(1) For more information about this AD, contact Darren Gassetto, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7323; email Darren.Gassetto@faa.gov.

(2) Service information identified in this AD is available at the contact information specified in paragraphs (j)(5) and (6) of this AD.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2021-0054, dated February 25, 2021. You may view the EASA AD at <https://www.regulations.gov> in Docket No. FAA-2021-1174.

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Leonardo Helicopters Alert Service Bulletin No. 139-648, Revision A, dated February 15, 2021.

(ii) Leonardo Helicopters issued Alert Service Bulletin No. 139-662, dated February 15, 2021.

(4) The following service information was approved for IBR on December 4, 2020 (85 FR 73610, November 19, 2020).

(i) Leonardo Helicopters Alert Service Bulletin No. 139-648, dated August 10, 2020.

(ii) [Reserved]

(5) For Leonardo S.p.a. service information identified in this AD, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G. Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://customerportal.leonardocompany.com/en-US/>.

(6) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 14, 2022.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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